Claims:

1. The use of a chemokine capable of directing the migration of dendritic cells in the manufacture of a medicament for the treatment of a disease state.

2. The use of claim 1 wherein the chemokine is selected from the group consisting of MCP-1, MCP-2, MCP-3, MCP-4, MIP-1α, MIP-1β, MIP-3α, RANTES, SDF-1, Teck, DCtactin-β, 6Ckine/SLC, LEC, MDC, and MIP-5.

3. The use of claim 1 wherein the chemokine is capable of directing the migration of dendritic cells to the site of antigen delivery.

4. The use of claim 1 wherein the chemokine is capable of directing the migration of dendritic cells to lymphoid organs.

5. The use of claim 1 wherein the disease state is a bacterial infection, a viral infection, a fungal infection, a parasitic infection or cancer.

6. The use of claim 1 wherein the disease state is an autoimmune disease, tissue rejection or an allergy.

7. The use of claim 5 wherein the disease state is cancer selected from the group consisting of melanoma, breast, pancreatic, colon, lung, glioma, hepatocellular, endometrial, gastric, intestinal, renal, prostate, thyroid, ovarian, testicular, liver, head and neck, colorectal, esophagus, stomach, eye, bladder, glioblastoma, and metastatic carcinomas.

8. The use of claim 3 wherein the dendritic cells are immature dendritic cells.

9. The use of claim 8 wherein the chemokine is selected from the group consisting of MCP-1, MCP-2, MCP-3, MCP-4, MIP-1B, MDC, MIP-3α, MIP-1α, RANTES and MIP-5.

10. The use of claim 4 wherein the chemokine is MIP-3β.

11. The use of claim 3 further comprising the use of at least one disease-associated antigen.

12. The use of claim 11 wherein the antigen is a tumor-associated antigen.

13 The use of claim 11 wherein the antigen is a bacterial, viral or fungal antigen.

14. The use of claim 12 wherein the tumor-associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc, MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp100, NY-ESO-1, telomerase and p53.

15. The use of claim 14 wherein the cancer is prostate cancer and the tumor-associated antigen is PSA and/or PSM.

16. The use of claim 14 wherein the disease state is melanoma and the tumor-associated antigen is Melan-A, gp100 or tyrosinase.

17. The use of claim 1 further comprising the use of an activating agent.

18. The use of claim 15 wherein the activating agent is selected from TNFα, RP-105, an anti-CD-40 antibody and nucleic acids containing unmethylated CpG motifs or ligands of toll-like receptors.

19. The use of claim 1 further comprising the use of a combination of GM-CSF and IL-4 in conjunction with the chemokine.

20. The use of claim 1 wherein the chemokines are administered intradermally, intramuscularly, subcutaneously, topically, or in the form of a vector.

21. A method of enhancing an immune response in a mammal comprising administering chemokine MCP-4 or a biologically active fraction of chemokine MCP-4 to said mammal.

22. The method of claim 21 wherein said chemokine is recombinant.

23. The method of claim 21 wherein said chemokine is human.

24. The method of claim 21 further comprising administering a substance which allows for the slow release of said chemokine at a delivery site.

25. The method of claim 21 further comprising administering an antigen with said chemokine.

26. The method of claim 25 wherein a fusion protein comprising MCP-4 and antigen is administered to said mammal.

27. The method of claim 25 wherein said antigen is a tumor associated antigen.

28. The method of claim 26 wherein said antigen is a tumor associated antigen.

29. The method of claim 25 wherein said antigen is a bacterial, viral or fungal antigen.

30. The method of claim 26 wherein said antigen is a bacterial viral or fungal antigen.

31. The method of claim 25 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase.

32. The method of claim 26 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase.

33. The method of claim 25 further comprising administering a combination of GM-CSF and IL-4.

34. The method of claim 26 further comprising administering a combination of GM-CSF and IL4.

35. The method of claim 21 further comprising administering an activating agent with said chemokine.

36. The method of claim 21 wherein said chemokine is administered intradermally, intramuscularly, subcutaneously, topically, or in the form of a vector.

37. A fusion protein comprising MCP-4 and antigen.

38. The fusion protein of claim 37 wherein said antigen is a tumor associated antigen.

39. The fusion protein of claim 38 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase.

40. The fusion protein of claim 38 wherein said antigen is a bacterial, viral or fungal antigen.

41. A plasmid comprising the fusion protein of claim 37.

42. The plasmid of claim 39 further comprising a promoter sequence particularly suited for dendritic cells.

43. A viral vector comprising the fusion protein of claim 37.

44. A method of enhancing an immune response in a mammal comprising administering chemokine 6Ckine or a biologically active fraction of chemokine 6Ckine to said mammal.

45. The method of claim 44 wherein said chemokine is recombinant.

46. The method of claim 44 wherein said chemokine is human.

47. The method of claim 44 further comprising administering a substance which allows for the slow release of said chemokine at a delivery site.

48. The method of claim 44 further comprising administering an antigen with said chemokine.

49. The method of claim 48 wherein a fusion protein comprising 6Ckine and antigen is administered to said mammal.

50. The method of claim 48 wherein said antigen is a tumor associated antigen.

51. The method of claim 49 wherein said antigen is a tumor associated antigen.

52. The method of claim 48 wherein said antigen is a bacterial, viral or fungal antigen.

53. The method of claim 49 wherein said antigen is a bacterial viral or fungal antigen.

54. The method of claim 48 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase and C26 colon carcinoma.

55. The method of claim 49 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase and C26 colon carcinoma.

56. The method of claim 48 further comprising administering a combination of GM-CSF and IL-4.

57. The method of claim 49 further comprising administering a combination of GM-CSF and IL4.

58. The method of claim 44 further comprising administering an activating agent with said chemokine.

59. The method of claim 44 wherein said chemokine is administered intradermally, intramuscularly, subcutaneously, topically, or in the form of a vector.

60. A fusion protein comprising 6Ckine and antigen.

61. The fusion protein of claim 60 wherein said antigen is a tumor associated antigen.

62. The fusion protein of claim 61 wherein said tumor associated antigen is selected from the group consisting of Melan-A, tyrosinase, p97, β-HCG, GalNAc., MAGE-1, MAGE-2, MAGE-3, MAGE-4, MAGE-12, MART-1, MUC1, MUC2, MUC3, MUC4, MUC18, CEA, DDC, melanoma antigen gp75, Hker 8, high molecular weight melanoma antigen, K19, Tyr1 and Tyr2, members of the pMel 17 gene family, c-Met, PSA, PSM, α-fetoprotein, thyroperoxidase, gp 100, p53 and telomerase.

63. The fusion protein of claim 61 wherein said antigen is a bacterial, viral or fungal antigen.

64. A plasmid comprising the fusion protein of claim 60.

65. The plasmid of claim 62 further comprising a promoter sequence particularly suited for dendritic cells.

66. A viral vector comprising the fusion protein of claim 60.

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